

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



62.33

1920

FEB 1 1920

# PLANT GRAFTED

## Paper-Shell Pecan Trees



The New Orleans Pecan Nursery  
Company

Office, 3442 St. Charles Ave.

New Orleans, La.

C. W. Eichling, President & General Manager

PHONE UPTOWN 188

Nurseries at Lacombe, La.

St. Tammany Parish

## General Directions To Customers

---

### PLEASE READ BEFORE MAKING OUT ORDERS

All Quotations are f. o. b. Lacombe, La., St. Tammany Parish, where our nurseries are located, about 22 miles in a bee line across Lake Pontchartrain from New Orleans.

**TERMS, CASH** with order, if for immediate shipment. On orders booked in advance of the shipping season 25 per cent down, with the balance due when the shipping season opens. Correspondence on terms solicited.

**REMITTANCES** may be made by P. O. Money Order, Express Money Order, New Orleans or New York Bank Draft, or Registered Letter. Cash sent through the mail is at sender's risk.

**APPLYING PRICES.** Five, fifty and five hundred trees at ten, hundred and thousand rates, respectively, purchaser's selection of varieties.

**SHIPPING DIRECTIONS.** Give plain and explicit directions for shipping. When none are given, we shall use our judgment in the matter, but in all cases shipments are at purchaser's expense and risk.

**SHIPPING SEASON** is from November to March.

**NO CHARGE FOR PACKING.** Our packing is done in the most careful manner, without any regard to the cost, for which no charge is made.

**WE GUARANTEE** all stock sent out to be well rooted, well grown, true to name, properly packed, and shipped according to instructions. Our liability under the foregoing guaranty is limited in amount to the original price received. Delivery in good order to the transportation company ends our responsibility.

**SUBSTITUTION.** When out of varieties ordered, we will substitute others, unless otherwise instructed. We use our best judgment in this matter.

**OUR LIABILITY.** We shall exercise every reasonable care and precaution in taking care of the stock purchased or booked for future delivery by any of our customers, and shall endeavor to deliver it in the best condition when wanted. But our liability shall not extend further than this, and it is expressly stipulated that we are not to be held liable for loss by any act of Providence beyond our control.

**CLAIMS.** If, by any possibility, errors should occur, they will be promptly rectified, if claim is made within ten days after the receipt of the goods.

**NO ORDERS** desired for less than \$4.00.

**References:** Whitney Central National Bank, New Orleans, La.

**Dun's or Bradstreet's.**



## BUYING PECAN TREES A MATTER OF CONFIDENCE.

Before we ask you to buy your Pecan Trees from our nursery we want you to know us. We want you to feel confident that your investment is safe and that your trees will be a source of profit and pleasure when they come into bearing.

Too much fraud has been perpetrated by unprincipled dealers in fruit trees, and especially in Pecans. Many have bought trees from unknown peddlers and found that they were deceived after it was too late to remedy the evil. Take our warning: DO NOT BUY FROM PEDDLERS.

Grafted Pecan trees of the standard varieties are the most valuable fruit trees the South can boast of and the greatest care should be exercised to secure the best. This is the kind of trees we grow and we back this assurance by a flawless reputation of over thirty years accompanied by well deserved success.

**MR. C. W. EICHLING**, our President and General Manager, has been in the nursery business in New Orleans since 1884, and enjoys the confidence of the entire South as a trustworthy man of wide experience and thoroughly honest business principles. He has built up a large business on the **SQUARE-DEAL BASIS**, and you can trust him.

Mr. Eichling served three years as President of the New Orleans Horticultural Society, President of the Louisiana State Horticultural Society, and is a member of the National Nut Growers' Association, an organization to which only nurserymen of good reputation have access.

He supervises every detail of the growing and shipping department.

## REMARKABLE SUCCESS WITH OUR TREES.

We have on file hundreds of complimentary letters from satisfied customers, proving our claim that a healthy tree with abundant root system, properly planted and cared for must grow. Good luck in tree planting is a poor factor. We do not trust in good luck. We know when a tree should grow, and good luck can only be claimed when a poor tree happens to grow. Such planting does not pay.

We use the utmost care in hand digging and packing trees. The roots are never exposed to the air; never allowed to get dry, and if the purchaser does his share, there should not be any loss. However, we can not control all conditions. Many trees die from drouth, flood, fire or damage by animals and plows. Careless plowmen are the worst enemies of trees.

## THE TAP ROOT.

The question of whether a Pecan Tree is injured by cutting the tap root has been argued so long and often that we will state here, once for all, that it does not make any difference in the growing or future bearing qualities of a Pecan Tree whether the tap root is partly removed in digging or not. The tree does not feed from the tap root; it feeds from the lateral and fibrous roots, and removing the tap root often encourages the formation of lateral roots, supplying more nourishment to the tree. Besides this, a Pecan Tree soon forms another or several tap roots, which serve principally to establish the tree firmly in the soil and protect it against storms.

## SOIL.

Pecan trees delight in moisture and well-drained, rich soil. Boggy, swampy land must be avoided. Sandy top—with clay subsoil, seems to suit them best. At least, we find it so in our nurseries. But any soil that produces ordinary farm crops, such as corn, potatoes, cotton, oats, etc., will make good Pecan Trees.

Land devoid of humus should be planted to leguminous crops to be plowed under. Without humus, mineral or commercial fertilizers are lost—the plants can not get the benefit of them, as the bacteria transforming fertilizer into available plant food only exist and propagate in humus. The Cotton Belt is about the northern limit for fancy Pecans. This gives the South a monopoly on this valuable fruit, which is only beginning to become known and appreciated in the North and Europe.



One of Our 8-10-Foot Mexican Papershell Trees Loaded With Fruit Three Years After Planting.

### PLANTING.

The proper distance for Pecan Trees depends upon the quality of the soil. In rich, alluvial soil, they should stand from 60 to 70 feet apart; 50 feet in average—and piny woods land, which latter calls for regular fertilizing. In some sections it is customary to plant in rows 35 by 50 feet. This allows the trees to stand about 18 years and bear from eight to ten paying crops before every second tree in the 35-foot row has to be cut out. This leaves the trees 50 by 70 feet—ample space for any quality of soil.

Before planting the land should be deeply plowed and harrowed. No grass or weeds should ever be allowed to grow around the trees. No crops should be planted closer than five feet from the young tree, on account of the tremendous loss of moisture to the tree during a dry spell. The cultivated strip along the tree rows should be sown to cow peas or other leguminous cover crops after July.

The holes should be 3 by 3 feet for fall planting and somewhat smaller for spring planting—the latter to concentrate more moisture to the roots. In digging holes, put the top soil to one side, to be used near the roots when filling in. Have a bucket of air-slacked lime and a bucket of fine bonemeal, at hand. First throw a few handfuls of lime against the walls of the hole to reduce or eliminate any acidity or sourness in the soil. If well-rotted manure is handy, it may be mixed with the bottom layer of soil on which the roots will rest. While one man holds the tree in position in the middle of the hole, the other will shovel the top soil on the roots, avoiding heavy lumps. The man holding the tree with one hand throws about two to three pounds of bonemeal between the soil as it is being shoveled in. The tree must stand as deep as it stood in the nursery—no part of the collar to be exposed to the air. When the hole is half full two buckets of water should be given and the soil carefully packed between the roots with a maul or stick two by two inches, the corners of which have been smoothed off to avoid bruising of the roots.

The top layer, 3 to 4 inches deep, should remain mellow and loose, so as to permit the air to penetrate and to encourage capillary moisture to rise. A stout stake on each side of the tree where the plow passes protects the tree against injury. This is of the greatest importance, and should be properly attended to. Remember that the roots must never be allowed to get dry while planting. Take one tree at a time out of the bundle, leaving the others covered with wet sacks or moss.

### FERTILIZING.

Pecan trees are coarse feeders. They are regular gluttons for plant food, and the finest trees are always found in the barnyard, where they get the benefit of plenty of moisture with chicken—and other manure.

The quantity of commercial fertilizer, such as truck and tree grower fertilizer, is as follows: When planting mix with the soil 2-4 lbs. of fine bonemeal. This acts slowly and will feed the tree the first year.

One year after planting—about February or March—apply from three to five pounds of truck fertilizer to each tree, hoeing it into the soil in a circle of about 3-4 feet. A mulch of stable manure during the following summer helps to keep the soil loose and prevents caking.

The second year after planting give from 6-8 pounds of fertilizer, and follow with a good mulch.



After that the quantity of fertilizer should be increased from year to year until the tree comes into bearing, when a fertilizer containing a higher percentage of potash should be used. A favorable formula for bearing trees is composed of 450 pounds of Nitrate of Soda, 1200 pounds Acid Phosphate and 350 pounds Sulphate of Potash to 1 ton of fertilizer, or in proportion for smaller quantities. If Cottonseed Meal is used as a source of nitrogen instead of Nitrate of Soda, the formula will require 1050 pounds of Cottonseed Meal.

The foregoing mode of fertilizing is recommended for all light soils, cut-over pine land, etc., while for rich, alluvial lands the quantity of fertilizer may be reduced. Some Pecan growers recommend applying the above quantities of fertilizer in two doses—half in February and half in June.



Such a Cluster of Mammoth Pecans on a Young Tree Would be a Good Sales Agent for a Young Grove.



**PLANTING TREES WITH DYNAMITE.**

Where the subsoil is of stiff clay or hardpan, it is much cheaper and easier to make holes with dynamite. With a two-inch augur, to which a four-foot handle has been welded, bore a hole about three feet deep. Take one-half of a stick, which is one quarter of a pound of 25% dynamite, or farm powder, and insert a blasting cap, to which a piece of fuse about a foot long has been fastened. Light the fuse, drop the dynamite into the hole and pack damp soil over the opening, tamping it down well and run. It will require about one minute for the blast to go off, and, unless the soil is full of rocks, there will not be much soil thrown out, and there is no danger to the operator at a distance of 50 feet.

The result of the blast is a loosening and pulverizing of the soil to a depth of from 6-10 feet, and the same distance in a horizontal direction. This could not be done by hand at ten times the cost, and never as well. Before planting a tree in a dynamited hole, the bottom soil must be well firmed down; otherwise, the tree will settle too low after the first rain. The difference in growth in favor of a tree planted with dynamite is wonderful. We planted hundreds of them these last few years, and can speak from experience. But we repeat that dynamiting is not necessary in ordinarily normal soil, and dynamiting should only be done during a long dry spell, when the ground is thoroughly dry; otherwise, the blast will not penetrate the soil; but, on the contrary, will pack bottom and sides of hole into an impenetrable mass, doing more damage than good.



A Four-Year-Old Japanese Persimmon Tree Planted Between Pecan Rows.  
Notice the Fruit.

### IT PAYS TO PLANT GRAFTED PECAN TREES.

We often hear people say: "If we had planted our land in good Pecan Trees twenty-five years ago, we would not need to work half as hard to-day."

This should be a warning to all who own land in the South, and yet they may not have so much to regret considering the mistakes they might have made in paying high prices for inferior trees. It is but a few years, comparatively, since the Pecan nursery business has been put on a solid basis. Nurserymen's experiences during the last twenty-five years have brought about many changes in methods of cultivation, discarding of varieties, sifting them down to a dozen of the best out of several hundreds offered previously. The man who plants Pecan trees to-day enjoys the benefit of years of study and experiments by the best Pecan men in the South.

Georgia, Texas and Florida are the leaders in acreage of Pecan groves. Mississippi is fast falling in line, and Louisiana, too, is waking up to the value of an investment in fancy Pecan trees. And the further the extension of the business the quicker is the erroneous impression being dissipated that it requires from ten to fifteen years before a Pecan tree brings any returns.

It should be remembered, also, that a Pecan grove can be grown almost without any cost to the owner, if there is a diversification of crops planted between the trees. The three P's—Pecans, Pigs and Peas—should be before a farmer's mind all the time.

The one-crop system is a thing of the past for safe farming, and Pecans—real FANCY PECANS—will help mightily to solve the problem. Every farmer should put fifteen to twenty per cent. of his land into grafted Pecan trees, and lay the foundation for an easy income for the future. Pecan trees of the right kind are the best life insurance for the farmer; he can get his money back on the premium and enjoy the returns in his old age, besides leaving a valuable heritage for his children and theirs.

We plant in our groves trees from seven to ten feet, and have observed a number of them, planted three years ago, with clusters of nuts. Records can be referred to that would open the sceptic's eyes to the possibilities and absolute value of fancy Pecan trees. At the meeting of the Mississippi Pecan Growers the reports on financial returns from Pecan groves proved rather attractive. The profits on individual acres ran as high as \$1200.00, being made by V. L. Beyer, of Wiggins, Miss. Other high profits include \$600.00, reported by Rev. L. E. Hall, of Hattiesburg, Miss; \$500.00 by R. W. Bruce, of Hermanville, and others almost as high. A profit on an eight-year-old grove of twenty acres of \$2800.00 was reported by M. C. Harper of Fayette, Miss. The crop of the original Frotscher tree was sold in 1918 for \$110.00. Hundreds of examples of profitable results—figures that are to be relied upon—can be cited in proof of profitable results from fancy Pecans. What has been done can be done over and better, and it can be done by the average farmer on the average farm. But any man who contemplates the setting out of Pecan trees should first settle firmly in his mind his willingness to give the trees what they require in careful planting, thorough cultivation and fertilization. If this policy of caring for the trees is followed without fail, then we say: Go ahead and plant Pecan trees, and time will prove it the best investment ever made on the farm.



**YOU NEED NOT WAIT TEN OR FIFTEEN YEARS**

to realize on your investment, and you need not die to get your money back with big profits. In case you wish to sell your young grove before it has come into full bearing, it is an easy matter to find a purchaser, if you can show that you have planted our grafted trees, to which we are always willing to certify. If you can lead a prospective buyer to a young tree bearing a cluster of those large nuts, talk is almost superfluous—that cluster will sell the young grove—and this can be done a few years after planting with the proper cultivation.

The price of fancy Pecans is on a steady rise, and will be high for years to come. The uses to which Pecanmeat is adapted are growing in number, and the world at large is only beginning to get acquainted with the fancy Pecan. Our choicest nuts are being bought up by exporters for the finest hotels, and the increasing demand will not be supplied in years to come. The fact that fancy Pecans will not thrive in a northern climate gives the South a monopoly on this valuable fruit, one of the few that would stand shipping around the globe in perfect condition if it had to await a favorable market.

And if, in the far future, the price of fancy Pecans should drop as low as twenty cents per pound, they will still pay handsomely in competition with meat products, owing to their great food value, which is being demonstrated by government food experts.



A Cluster of Giant Stuart Pecans (Reduced in Size) on a Young Tree.



### COMPARATIVE FOOD VALUE OF PECANS.

The Department of Agriculture at Washington, D. C., furnishes the following comparative analysis of Pecans, other nuts and other food products. The superior food value of Pecans is hereby indisputably established, and should be another incentive to prospective Pecan planters:

TABLE OF FOOD VALUES.

Nuts—	% Protein.	% Fat.	Calories.
<b>PECANS</b> .....	<b>12.1</b>	<b>70.7</b>	<b>3,300</b>
Brazil Nut .....	17.4	65.0	3,120
Cocoanut .....	6.6	56.2	2,805
Peanut .....	29.8	43.5	2,610
Filbert .....	16.5	64.0	3,100
Walnut .....	18.2	60.7	3,075

OTHER FOOD PRODUCTS.

	% Protein.	% Fat.	Calories.
White Bread.....	9.2	1.3	1,215
Wheat Flour .....	11.4	1.0	1,650
Potatoes .....	2.2	.1	385
Raisins .....	2.6	3.3	1,605
Beans, dried.....	22.5	1.8	1,605
Eggs, boiled.....	12.4	10.7	680
Beef, Round Steak.....	19.8	13.6	950

With the above knowledge in view and the physician's assurance that vegetable fats are much easier digested than animal fats, the mothers of our country will from day to day heed more the advice of the scientists to make Pecan meat a part of the daily lunch for School children. With the increase in our population this alone would call for more Pecans than the South produces and will necessitate almost doubling of present area planted in Pecan trees.

### PECAN SEEDLINGS VERSUS GRAFTED OR BUDDED TREES.

Time and years of study and experience have established the fact that it is a loss of time and money to sow Pecan nuts with the expectation of growing a tree that would bear the same or similar nuts. You would certainly not sow an Apple or Pear seed with the same expectation for the reason that they do not reproduce the same fruit and a large percentage of seedlings is entirely worthless.

If you were to sow Pecan nuts for seedlings you would have to wait from ten to fifteen years to find that you have a lot of worthless trees on hand of which not two are alike and some would never bear at all. It is taking a chance of one in a hundred thousand to produce a tree of fair quality from seed. At the price grafted trees of the very best varieties are offered that will bear a few years after planting it would be folly to attempt growing from seed.

### OTHER FRUIT TREES BETWEEN THE PECANS.

All conservative Pecan men admit that we can not depend on a paying crop from a young Pecan grove before the eighth year, though there have been large crops in the sixth and seventh year from our 7—10-foot trees.

It is therefore advisable to use the space between the trees by planting some quick-return fruit, such as Satsuma Oranges, figs, plums, Japanese persimmons, peaches or grapes. These fruit trees will grow and bear until the Pecan trees need the entire space. Where Pecan trees are planted 50 to 60 feet apart there is ample space between for two other fruit trees of the varieties mentioned. This will not increase the cost of cultivation as a strip five feet wide on each side of the Pecan rows must be kept cultivated and free from grass or crop until cow peas are planted on it end of July.

**Important.** It is necessary to drive a stout stake on each side of a tree where the plow passes to protect it against injury.



OUR 7-10 FOOT TREES IN NURSERY.

This is the size of trees we plant in our groves and recommend for quick returns.



### **CULTIVATION.**

After proper planting of a Pecan grove, Cultivation is the factor which will help you realize your expectations, without proper cultivation your investment is a loss. We recommend the following mode: Late in the fall when the leaves are down and the sap is at rest give the trees a plowing four or five inches deep. This will absorb the winter's rains and store an abundant supply of moisture in the soil. During the balance of the year shallow cultivation must be repeatedly given in order to keep down the grass and encourage capillary moisture to rise. Avoid deep cultivation during the growing period, many a crop of half ripe nuts has been lost through this. Sow cow peas into the tree rows after the end of July and keep small crops, truck, etc., growing between the rows.

### **THE COST OF A PECAN GROVE AND POSSIBILITIES.**

If the trees are planted 50 feet apart with a margin of 15 feet from the property line a five acre tract will require 80 trees. The price including freight and planting would be from \$80.00 to \$110.00. Cultivation would not cost one cent extra if crops are planted between the rows, allowing a cultivated strip of from ten to twelve feet in the rows. Fertilizing of 80 trees during the first four years should not cost over \$35.00, provided that stable manure is used together with commercial fertilizer. If the spaces between the trees are planted with early bearing fruits such as Satsuma Oranges, Persimmons, Figs, Plums or Grapes, these would in a few years more than pay for themselves and the cost of the Pecan trees. Growing truck crops between the tree rows is of the greatest benefit to the trees, we always find the greatest success where this is done as the constant cultivation keeps down the grass and retains the much needed moisture in the soil.

For eight year old Pecan groves the lowest price asked is \$1,000.00 per acre, very few can be bought for this price.

The president of the National Nut Growers Association states that his trees at eight years after planting had paid for the cost of the land, trees, fertilizers and interest on the investment. He values his trees at ten times the total cost.

The cheapest deal on record is the sale of a ten year old grove of seventy acres for \$25,000.00 by Mr. Paul P. McKeown of Concord, Fla.

Mr. C. M. Barnwell of Baconton, Ga., sold his six hundred acre grove of which only one half was of bearing age for \$200,000.00.

\$1800.00 per acre was refused for the Delmas grove at Scranton, Miss. Considering that a Pecan Grove beginning to bear steadily increases its annual returns and continues to bear for 150 years or more, can you imagine a better and safer investment on a Southern farm?

### **VARIETIES.**

Of over one hundred varieties of Pecans listed we grow only such as have given general satisfaction and have proven their adaptability to all sections of the South. Each one has its good points and by allowing us to use our judgment to some extent in the selection of varieties you can not make a mistake.

Our prices are based on first class trees with a healthy root system and are about one-half of what you have been paying to Peddlers.

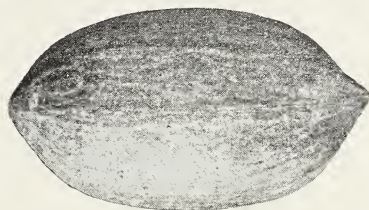




**Mexican Papershell.** New and scarce, introduced by the late Col. Stuart of Ocean Springs, Miss. By those who know its superior qualities it is justly considered the best all around Pecan today; we find it also under the name of Bass Papershell, which is, of course, renamed as the introducer named it Mexican. It is a regular, heavy bearer.

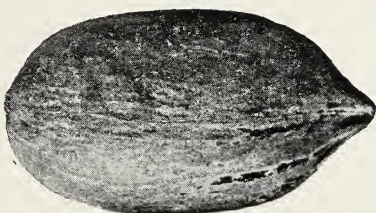
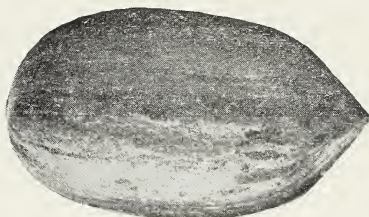
Nuts of good size, very thin shell, of splendid flavor and easy cracking quality. Tree a fast and healthy grower.

**Stuart.** Originated on the Gulf Coast and is more largely planted for commercial purposes than any other variety. Nut very large, cylindrical, of grayish brown color, splashed with black. Shell medium thin, flavor of the richest and sweetest.



**Success.** The originator of this great Pecan, comparatively new, has had uninterrupted crops from it for the last ten years. It classes among the large nuts, thin shell, good cracking quality, excellent flavor, and of a number of varieties it has proven the heaviest kernel.

**Frotscher.** The largest of the real papershells. Flavor and cracking qualities of the best. Has made the highest record for any single tree as to money returns. Does not like drouth, and therefore recommended for moist locations, alluvial sections have brought out its best qualities.



**Steckler.** If we could get enough propagating wood of this great nut we would make it in a short time the champion Pecan. We have watched it for years and the few trees in bearing have made big money for their owners. Never sold for less than \$1.00 per pound and never enough of them. Size, flavor, shell, bearing and health of tree is not excelled by any known variety. Plant some by all means.

**Van Deman.** A reliable standby of the older varieties. Nut very long and pointy, very attractive, shell soft and kernel easily removed.





**Pabst.** Named for its introducer and a variety of great merit. It does not come into bearing as early as some but it has made good on the Gulf coast as a commercial nut. Form similar to Stuart but smaller, quality of the best. It does not shed the fruit during a dry spell.

**Schley.** The aristocrat among the Pecans. Nothing better in the nut world and if the Schley were a heavier bearer we would not need another variety. Shell of the thinnest, kernel plump, size large enough for a fancy market. Best for the home garden, where it can be properly cared for to avoid rosette, a disease attacking trees stunted from the effects of poor nourishment.

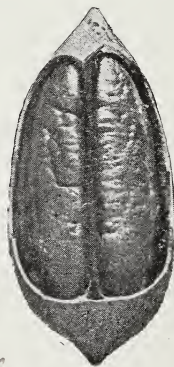


**Delmas.** Another of the Gulf Coast Pecans that has given general satisfaction. A large, pretty nut, averaging from 40 to 50 to the pound, a good dry land Pecan, regular bearer and a very thrifty grower.

**Nelson.** The Giant among Pecans, the delight of all who look for an early, big crop of monster pecans on their young trees. Not a papershell, but we believe it sells on its size. Nelson has withstood drouth and flood and storms and has come out victor. Plant same for family use, you will be delighted with them.



**Ladyfinger.** The greatest money maker of all. A true papershell of the finest flavor and perfect cracking qualities. Not a large Pecan, but when it comes to weighing a crop the Ladyfinger leaves them all behind. Orchards are planted for an income, the buyer decides the value of a variety, and here is where the Ladyfinger has stood the test, it has looks and flavor and bears heavier, regular crops than any variety we know of.



*By request of the originator now called  
"The Beech"*



This great Pecan originated on Mr. Geo. B. Reuss' Plantation, and will be sent out in the fall of 1920. We are prepared to take orders now for a limited number of trees, price double that of other varieties listed. Nothing over six feet to offer.

Filling of orders subject to conditions named on inside front cover, acts of Providence, etc.

### PRICES OF OUR FANCY PAPERSHELL PECAN TREES.

We here repeat that we ship out only healthy, well-rooted trees that will grow if properly planted. Our prices include careful packing and delivery to our express or railway station at Lacombe, La., on the New Orleans Great Northern Railroad, about midway between Slidell and Mandeville, La.

Our prices are about one-half of what you pay tree agents, and by buying from us directly you have the assurance of trees freshly dug.

	Each.	10	100
4 feet .....	\$ .70	\$6.00	\$50.00
5 feet .....	.80	7.00	60.00
6 feet .....	.90	8.00	70.00
7 feet .....	1.00	9.00	80.00
7 to 9 feet.....	1.25	10.00	90.00
7 to 9 feet, very heavy.....	1.50	12.00	100.00
10 feet extra.....	2.00	17.50	150.00

We bill five trees at the rate of ten and twenty trees at the hundred rate.

### INSECT ENEMIES AND DISEASES OF PECAN TREES.

This subject is intentionally omitted in most catalogues and is misleading. Pecan trees are not immune to enemies but there are so few of them that they may be easily controlled.

#### THE BUD- AND CASE MOTH.

Two distinct insects but so very near alike in looks, habits and mode of damage that they may be described as one. They lay their eggs immediately under the buds and when the leaves unfold a caterpillar of dirty, greenish color emerges and begins to eat the young leaves. It is about five-eighths of an inch long, is usually found single and wrapped in a folded leaf. It can be easily controlled by spraying with arsenate of lead dissolved in water at the rate of one ounce to three gallons of water.

#### THE FALL WEB WORM.

This caterpillar begins its work early in the spring as soon as the leaves are fully developed. The eggs are laid in masses of four to five hundred on the under side of the leaves. These hatch in about ten days and the young caterpillars begin their work of destruction. On small trees they may be destroyed by removing the nests. On large trees a torch on a long stick may be used to burn them.



### THE TWIG GIRDLER.

This insect is a beetle or bug of dark gray color, almost an inch long, with antennae or feelers longer than its body, and provided with sharp mandibles. It is the female that does the damage. After laying an egg under each leaf of a small branch it comes back to the lowest leaf and cuts the branch almost entirely off. The first strong wind completes the job, the branch breaks and falls to the ground, where the eggs are hatched in the spring under the shelter of the fallen leaves. The artful instinct of this beetle is remarkable. The most effective treatment is to gather and burn all the twigs that have fallen. This must be done late in the autumn after all the leaves have fallen.

### THE PECAN TREE BORER.

The eggs are deposited on the bark of a tree near a fresh wound. The eggs hatch and the larvae or borers work themselves into the bark and there live for a while, eating out the soft inner bark and soft wood. They remain in this situation over winter, working their way upward and encircling the tree under the bark.

The only satisfactory means of controlling them is to go carefully over each tree from time to time and dig them out with a wire or a sharp knife.

### PECAN SCAB.

This is a disease caused by a fungus which attacks the immature nuts, leaves and branches. It first appears in form of small, black dots, which gradually enlarge and join one another, thus covering the whole surface. Thus far the seedling trees have been more affected than grafted or budded trees, only a few varieties being partly subject to it. Spraying with Bordeaux mixture when the leaves are half grown and again when the fruit is formed is recommended. A spraying with Lime Sulphur in the early spring before the growth starts often prevents an outbreak.

### PECAN ROSETTE.

This is one of those diseases upon which the best doctors disagree. The earliest symptoms are a crimping of the leaves at the ends of the branches. These leaves are smaller than usual and crimped at the margin. The tree shows the disease over the whole top at once, the foliage assumes a bunched appearance, hence the name.

Poor soil and neglect seems to be the principal cause of this trouble, and where trees receive their proper attention this pest is rare.

THE PECAN AND ITS CULTURE, by H. Harold Hume, is, to our knowledge, the best book on Pecans.